

## MEMORANDUM

TO: WSDOT Maintenance Personnel

FROM: Rico Baroga, Maintenance Accountability Process Manager

DATE: January 25, 2001

SUBJECT: 2000 Maintenance Customer Survey

This memorandum serves to transmit the final report of a customer survey conducted in September 2000 that evaluated customer satisfaction of state highway maintenance activities in Washington State. The 2000 customer survey follows a similar survey that was conducted in 1995 which was part of the initial development of the Maintenance Accountability Process (MAP).

The results of the customer survey represent some useful performance measurement information that can be used by maintenance managers in delivering the highway maintenance program in a manner that strives towards customer satisfaction. As the survey questions were fairly general in nature and directed towards a statewide audience, the results should not be used as the *sole* basis for any significant changes in program direction. Rather, the customer survey results should be utilized in conjunction with other tools and resources (i.e. MAP Level of Service data) that are available to support the professional judgment of maintenance managers.

For example, although the survey reported that we are exceeding the expectations of our customers regarding roadside vegetation management and eliminating roadside weeds, this should not be taken as a mandate to cease or drastically reduce these activities. The maintenance manager knows that local Noxious Weed Boards and neighboring property owners think otherwise about vegetation management. Additionally the survey reported that roughly as many people think that highway maintenance work should be contracted to private companies as those that think this work should not be contracted. The maintenance manager knows however that in some cases contracting work is going to cost much more in taxpayer dollars to deliver the same LOS that state forces currently deliver. The maintenance manager also knows that the current Civil Service codes in Washington State prohibit contracting the vast majority of highway maintenance work currently conducted.

In summary, the positive ratings of this customer survey demonstrate that the public is generally satisfied with the Highway Maintenance Program. The survey provides some additional information that can be helpful to maintenance managers as they continue delivering the program and seeking out opportunities for continuous improvement.

**WSDOT Maintenance Customer Survey  
Summary Report**

**January 2, 2001**

**Prepared for:  
Washington State Department of Transportation Maintenance Division**

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## **EXECUTIVE SUMMARY**

### **Purpose**

Washington State Department of Transportation (WSDOT) is interested in evaluating customer satisfaction of state highway maintenance activities. In order to obtain public input, information regarding perceptions of maintenance activities in general and the publics' priorities in particular needed to be obtained from the general public. Pacific Rim Resources (PRR) was contracted to develop, implement and analyze data from a statistically valid telephone survey administered to residents of the State of Washington.

### **Methodology**

Pacific Rim Resources in consultation within WSDOT:

- Developed a statistically valid telephone survey of Washington State residents (divided into three geographic regions).
- Pre-tested the survey and made necessary revisions before final fielding.
- Fielded the telephone survey to a random sample of 632 Washington State residents (divided into three geographic regions).

### **Results**

#### **A. Satisfaction and Importance of Maintenance Categories (Gap Scores)**

By subtracting the mean satisfaction score from the mean importance score, either a positive or negative gap score is created (unless the two means are equal). These gap scores help to indicate which areas might need to be improved.

- The maintenance activities with the highest negative gap scores were roadway surfaces, road stripes and pavement markings, drainage, and snow/ice removal indicating that these are areas that the public perceives WSDOT maintenance needs to improve on.
- Eliminating weeds and maintaining roadside vegetation received positive gap scores indicating that maintenance activities exceed the publics' expectations.

#### **B. General Satisfaction and the Overall Maintenance Rating**

- More than three-quarters (77%) said they were generally satisfied with the level of maintenance on State highways .
- Later in the survey a query about satisfaction with "overall maintenance" provided a rating of 3.65 on a scale of 1 to 5 with one being "very poor" and five being "excellent." This rating falls between "average" and "above-average." Sixty percent reported overall maintenance as being "excellent" or "above average." Thirty-four percent gave an "average" rating while only 6% rated maintenance as being "fairly poor" and "poor."

### **C. Response to Emergencies**

- Response to emergencies received a rating of 3.85 on a scale of 1 to 5 with one being “very poor” and five being “excellent.” Sixty-four percent reported emergency response to be “excellent” or “above average.” Thirty-three percent gave an “average” rating while only 3% rated maintenance as being “fairly poor” and “poor.”

### **D. State Highways Compared to Local Roads**

- A third (33%) of the respondents found state highways to be “considerably better” than local roads. Twenty-eight percent thought they were “somewhat better” and 32% thought they were “about the same.” Seven percent reported they were “not quite as good” or “much worse.”

### **E. State Highways Compared to Other State Highways**

- Twenty-four percent reported state highways to be “considerably better” than those in other states. Twenty-nine percent thought they were “somewhat better” and 36% thought they were “about the same.” Eleven percent reported they were “not quite as good” or “much worse.”

### **F. Salmon Recovery Issues**

- When asked about whether more money should be spent on maintenance activities in light of the amount of spending that will go toward restoration of salmon habitat, two-thirds (66%) of the respondents favored providing more money to maintain current levels of maintenance activities.

### **G. Private Contracting**

- Forty-four percent of the respondents said they would be in favor of private companies doing maintenance work under contract to the state. Thirty-nine percent said they are not in favor, and seventeen percent said they don’t know.

### **H. Regional Differences**

- Despite the apparent differences between the three regions in the graphs, the only statistically significant difference was between Eastern Washington and the two Western regions on the issue of increasing the maintenance budget because of the Endangered Species Act. Eastern Washington was less interested in providing more funding.

### **I. Respondent Demographics**

- Respondent demographics (age, race, etc.) provided no strong relationships with the data. There were, however, statistically significant but weak relationships between gender and importance scores for all of the maintenance categories (roadside maintenance, litter removal, etc.). In general, females rated the maintenance activities as more important than males.

## I. Purpose

Washington State Department of Transportation is interested in evaluating customer satisfaction of state highway maintenance activities. In order to obtain public input, information regarding perceptions of maintenance activities in general, and public priorities in particular needed to be obtained.

Pacific Rim Resources (PRR) was contracted to develop, implement and analyze data from a statistically valid telephone survey administered to residents of Washington State. The survey results provided representative data on attitudes, knowledge, and behaviors regarding:

- Use of state highways
- Priorities of Washington state drivers regarding highway maintenance
- Attitudes towards issues specific to Washington State that may impact highway maintenance

This report summarizes the results of the survey.

## II. Methodology

Pacific Rim Resources in consultation with WSDOT:

- Developed a statistically valid telephone survey of Washington State residents from three geographic regions (see Attachment A).
- Pre-tested the survey and made necessary revisions before final fielding.
- Fielded the telephone survey to a random sample of 632 Washington State residents.

## III. Sample

A sampling frame of 6000 Washington State residents was purchased through *Experian*. Respondents in each of the three geographic areas were randomly selected from the sampling frame for inclusion in the telephone survey. A disproportionate, stratified random sample (stratified by the three geographic regions) was used. This stratification allowed for a final sample that had an overall margin of error of  $\pm 4$  percent and had sufficient numbers of respondents from each of the three geographic regions to produce within each region a margin of error of  $\pm 6.93$  percent. The final sample of 632 residents were randomly selected with the following quotas operating:

- One-third of the sample was called “Western Non-urban,” and it included the following counties: San Juan, Island, Whatcom, Skagit, Clallam, Jefferson, Kitsap, Grays Harbor, Mason, Thurston, Pacific, Wahkiakum, Lewis, Cowlitz, Clark, and Skamania.
- One-third of the sample was called “Eastern,” and it included the following counties: Okanogan, Chelan, Kittitas, Yakima, Klickitat, Douglas, Grant, Benton, Franklin, Walla Walla, Columbia, Garfield, Asotin, Whitman, Adams, Lincoln, Spokane, Ferry, Stevens, and Pend Oreille.
- One-third of the sample was called “Western Urban,” and it included Pierce, King and Snohomish Counties.

In order to reduce response bias, up to six attempts per potential respondent were made to establish telephone contact at different times of the day and different days of the week. The person in the household who reported driving on a state highway 50 miles or more per week was interviewed. If no one in the household drove that distance on a weekly basis, then the members of that household were not interviewed.

## **IV. Data Processing and Analysis**

Data processing consisted of coding and entering quantitative and qualitative responses with the use of a CATI (Computer Assisted Telephone Interview) system; performing response range and logic checks on quantitative variables in order to check for miscoded variables, and cleaning the final data file. The final data file was an SPSS (Statistical Package for the Social Sciences) data file.

Data analysis involved the use of appropriate descriptive statistical techniques (frequencies, percentages, means) and explanatory statistical techniques (Kendall's Tau c, Cramers V, and one-way analysis of variance). Throughout this report relationships between variables that are statistically significant at the .05 level or better will be reported accompanied in parentheses by the statistical test of significance, the respective coefficient, and the significance level.<sup>1</sup>

## **V. Sample Characteristics**

The information in this section of the report provides an overview of the respondents in the sample.

### ***A. Demographic Characteristics***

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<sup>1</sup> For example, a Kendall's tau c statistic is a measure of the relationship between two variables and is appropriate to use with ordinal level variables or with dichotomous nominal level variables. Tau c ranges from -1 to +1 and indicates the strength and direction of a relationship. The closer to either +1 or -1, the stronger the relationship between the two variables. The accompanying "p" score indicates the level of statistical significance.

1. Gender (n=632):
  - Female (45.3%)
  - Male (54.7%)
2. Race (n=632)
  - White/Caucasian (88.6%)
  - Black/African American (1.3%)
  - Latino/Hispanic (1.4%)
  - Native American/Indian (1.9%)
  - Asian/ Pacific Islander (1.4%)
  - Did not respond (4.1%)
3. Age (n=632):
  - Under 25 (7.0%)
  - 25 to 34 (10.8%)
  - 35 to 44 (18.0%)
  - 45 to 54 (24.8%)
  - 55 to 64 (18.4%)
  - 65 to 74 (14.6%)
  - 75 and older (3.8%)
  - Refused (2.7%)
4. Type of residence area(n=632):
  - Metropolitan area (23.7%)
  - Suburban (29.3%)
  - Small town or rural (47.0%)
5. Years lived in WA (n=632):
  - Less than 6 months (.9%)
  - 6 months to 11 months (.3%)
  - 1 to 4 years (6.3%)
  - 5 to 9 years (7.3%)
  - 10 or more years (85.1%)

## **B. Travel Behavior**

1. Approximate days per week traveled on state highways per week (n=632):
  - 1 day (2.2%)
  - 2 days (7.1%)
  - 3 days (9.7%)
  - 4 days (9.0%)
  - 5 days (22.9%)
  - 6 days (13.3 %)
  - 7 days (35.8%)
2. Number of working vehicles in household (n=632):
  - One (14.4%)
  - Two (41.9%)
  - Three (24.5%)
  - Four (10%)
  - Five (5.1%)
  - Six or more (3.8%)
  - Did not respond (.5%)
3. Miles traveled on state highways (n=632):
  - 50-100 miles (36.9%)
  - 101-150 miles (15.3%)
  - 151-200 miles (9.5%)
  - 201-250 miles (7%)
  - 251 or more miles (31.3%)

## **VI. Results<sup>2</sup>**

Although differences between the three regions of the state were generally not statistically significant or were very weak differences, charts are presented with results broken out by the three regions. In addition a total of all three regions is presented in each chart.

### **A. Satisfaction with Level of Maintenance**

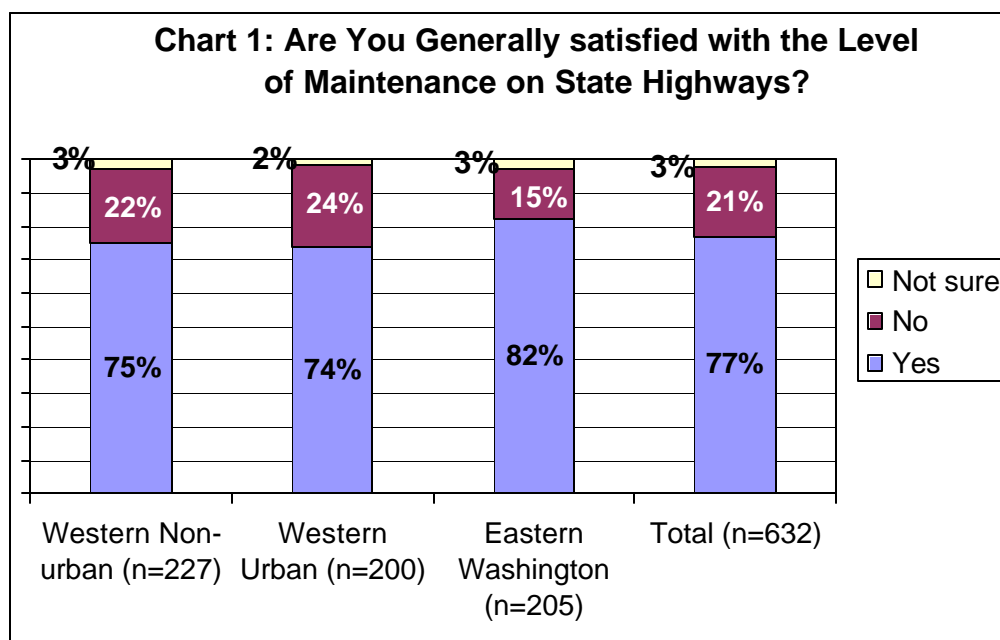
#### **1. General Satisfaction**

Respondents were asked if they were generally satisfied with the level of maintenance on state highways. Chart 1 indicates that more than three-quarters (77%) are

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<sup>2</sup> Because the sample was a disproportionate stratified random sample (stratified disproportionately among three sections of Washington State) and because only individuals who drive 50 miles or more a week on state highways were interviewed, these sample characteristics are not necessarily representative of all of Washington State.

generally satisfied with the level of maintenance. Less than one-quarter (21%) of the respondents reported they were not satisfied.



## 2. Areas for Improvement

Of those respondents who indicated that they were not generally satisfied with the level of maintenance or reported that were not sure, 71% said that the maintenance of the roadway surface needed to be improved. Fourteen percent indicated that the amount of litter, debris and overgrown vegetation is an area that needs to be improved. Twelve percent indicated that signs, signals and lane striping needed to be improved.

**Table 1: Areas for Improvement (as reported by those not satisfied with level of highway maintenance)**

<i>Activity</i>	<i>n</i>	<i>%*</i>
Roadway Surfaces	104	71%
Removal of Litter	21	14%
Other	21	14%
Roadway Signs	18	12%
Snow/ice Removal	6	4%
Shoulder Maintenance	5	4%
Drainage Problems	4	3%
Total	146	

\*Percentages do not add up to 100% because respondents could give more than one response.

## **B. Gap Analysis (Evaluating Importance and Satisfaction)**

A gap analysis was performed by determining the level with which the respondents were satisfied with WSDOT Maintenance activities, and how important the respondents reported those activities to be to them. Each item in this section of the survey was rated on a scale of 1 to 4, with 1 being either “very dissatisfied” or “very unimportant” and 4 being “very satisfied” or “very important”. By subtracting the mean satisfaction score from the mean importance score, either a positive or negative gap score is created (unless the two means are equal).

- A positive gap indicates that the WSDOT maintenance activity in question exceeds the respondents’ expectations for that activity.
- A negative gap indicates that the WSDOT maintenance activity does not live up to the respondents expectations for that activity.

This gap analysis can be helpful in assigning priorities, especially considering the question posed to the respondents: “if I had \$200 worth of work to do but only \$100 to spend, which work activities would I spend the money on and which would not get accomplished.” The activities with the highest negative gap scores would be the activities viewed as top priorities by the respondents.

Charts 2-4 present the gap analysis for each region of the state. Differences between the regions are not statistically significant or are extremely weak.

### **1. Positive Gap Scores**

Charts 2-4 show the two areas where WSDOT is exceeding the respondents’ expectations: in the maintenance of roadside vegetation and in the eliminating of weeds. Although there is a positive gap, neither the importance scores nor the satisfaction scores are very high. The data indicates that there is a moderate level of satisfaction, but that neither of these maintenance activities is very important to the respondents. The respondents believe WSDOT does not need to improve in the areas of maintenance of roadside vegetation or the elimination of weeds.

### **2. Negative Gap Scores**

The largest gap scores are indicative of the WSDOT maintenance activities that the respondents believe need to be improved upon.

- The largest negative gap scores (-1.0 in two regions and -0.9 in the other) was the condition of roadway surfaces. This was consistent among the three regions.

- The second largest gap score in each region was drainage, which had a –0.8 gap score in every region.
- Another large negative gap score was the condition of road stripes and pavement markings. This had a -0.8 gap score in the Western Urban region and a -0.7 gap score in the other two regions.
- Drainage and snow/ice removal also had large negative gap scores, but were higher in Eastern Washington (-0.7) than in the other two regions (-0.6).
- Traffic signals, highway lighting, road shoulders, and roadside litter and trash removal also had relatively large gaps scores.

Chart 2: State-wide Gap Analysis (n=632)

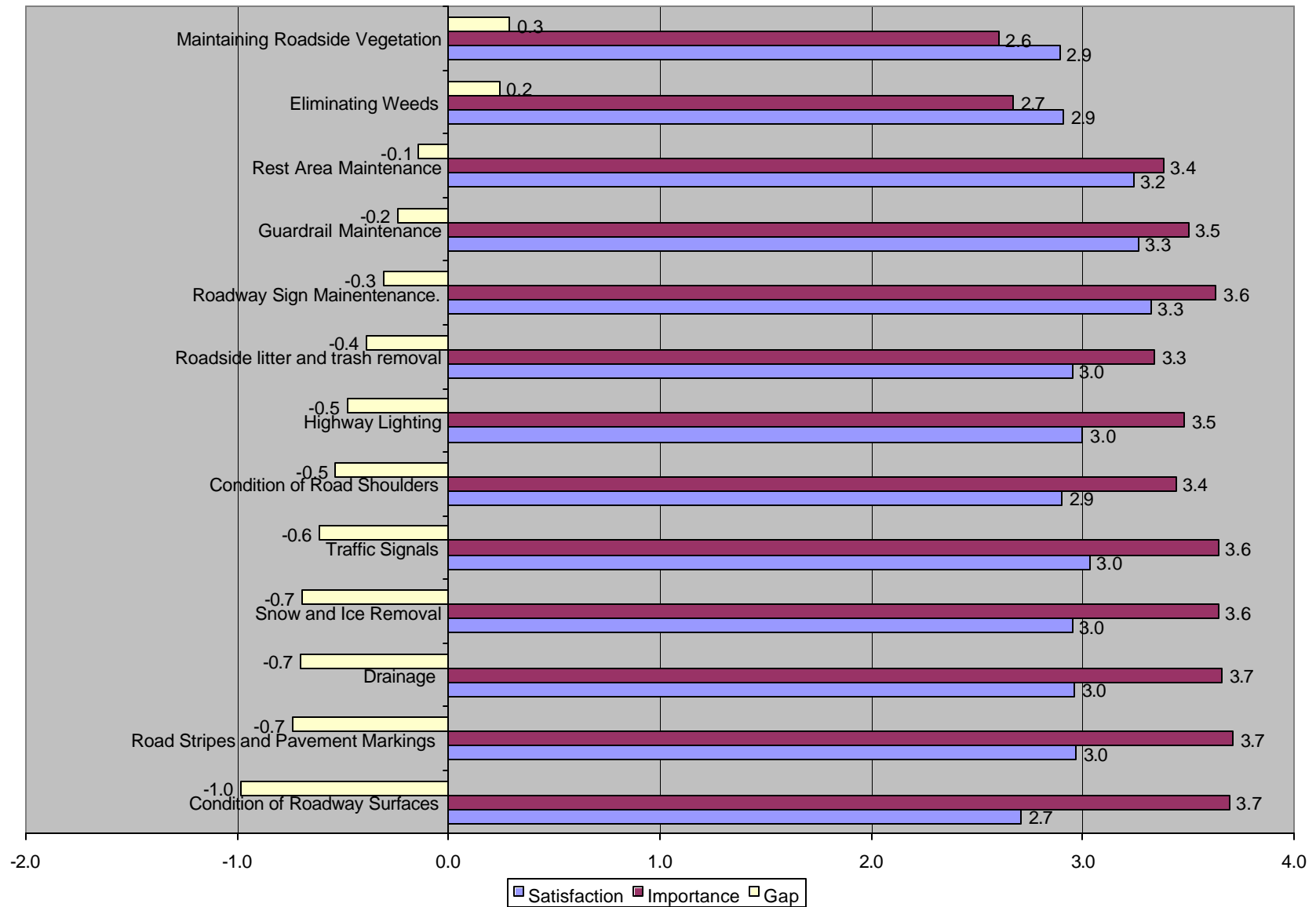


Chart 3: Western Non-urban Washington (n=227)

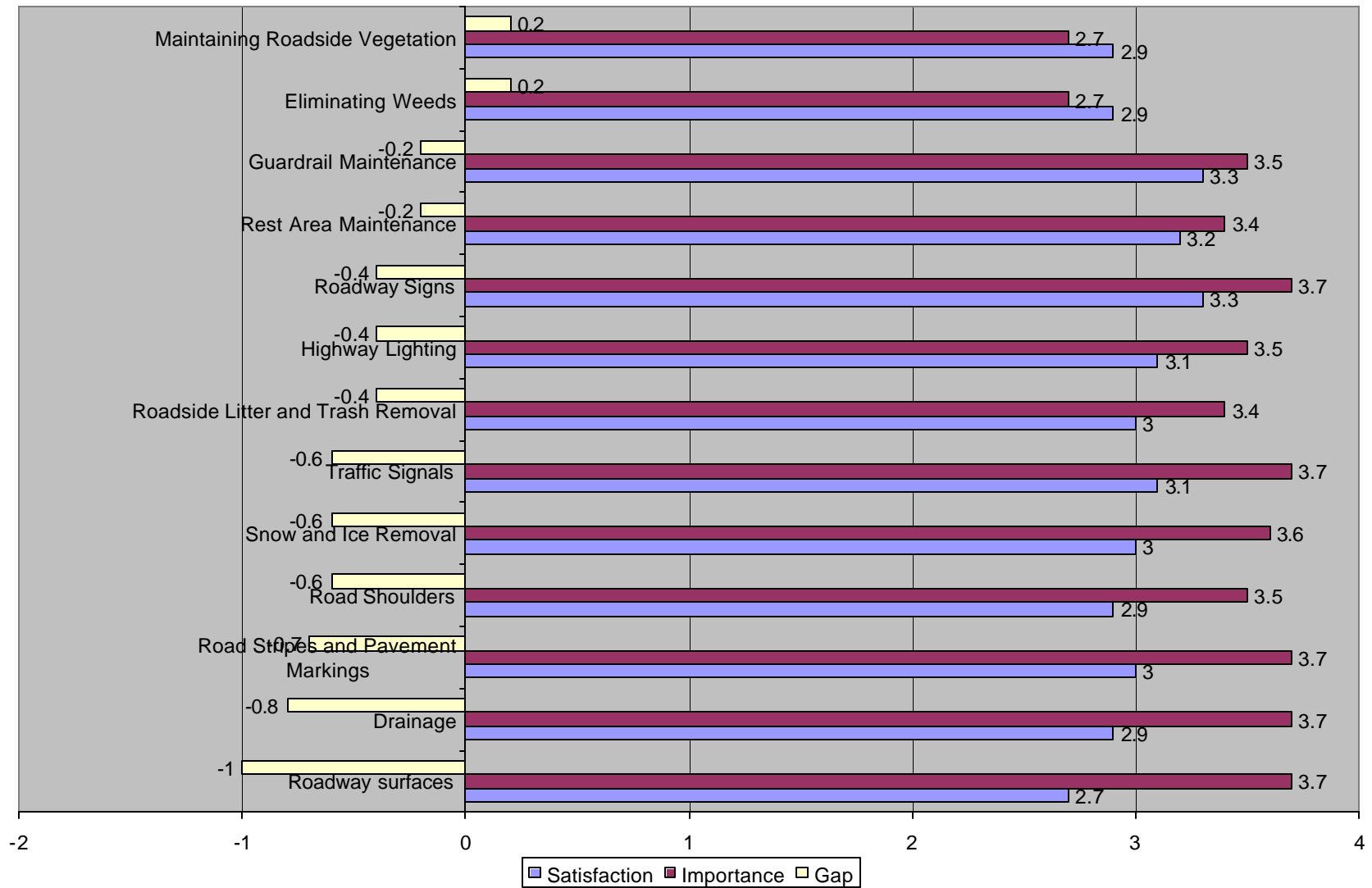


Chart 4: Western Urban Washington (n=200)

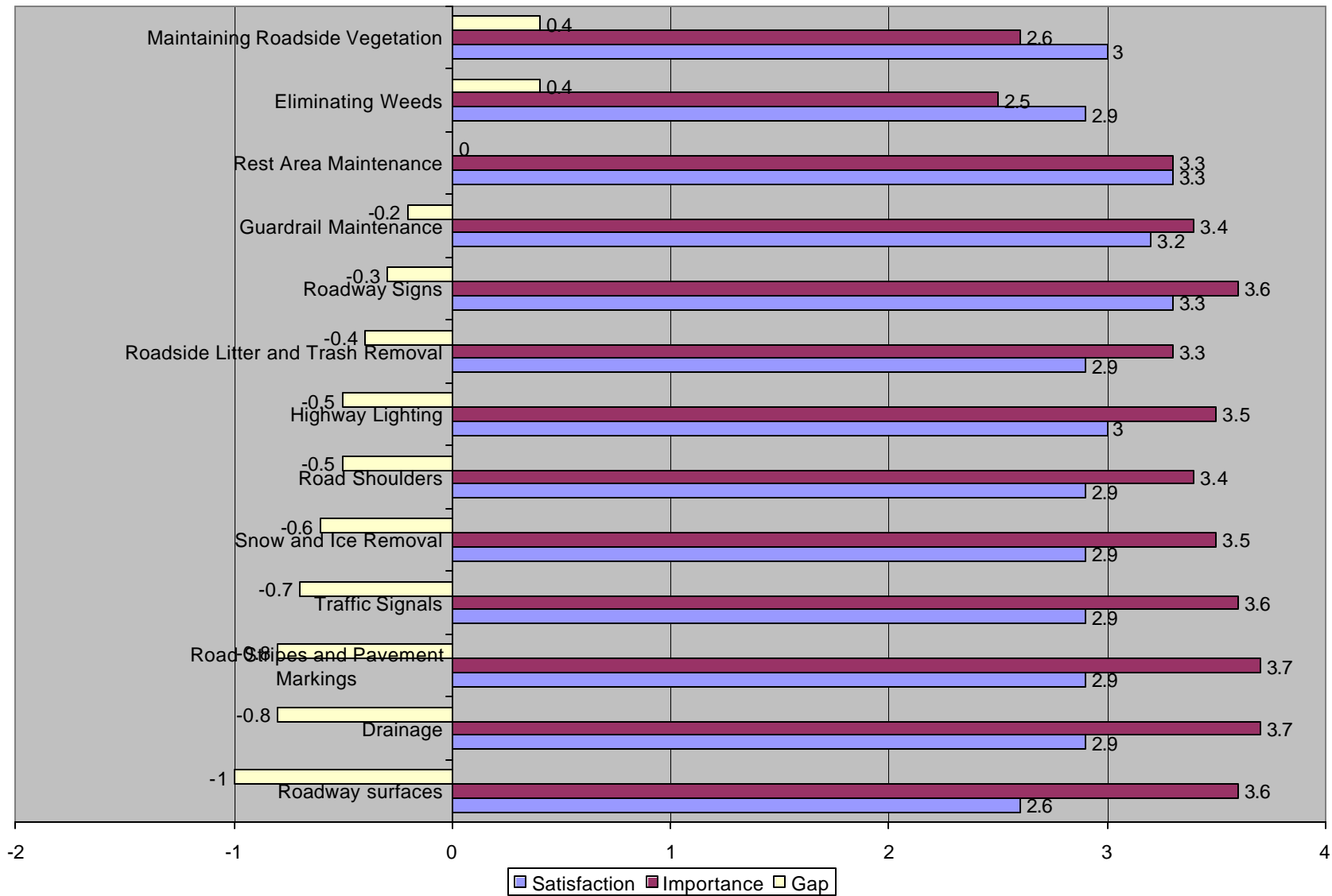
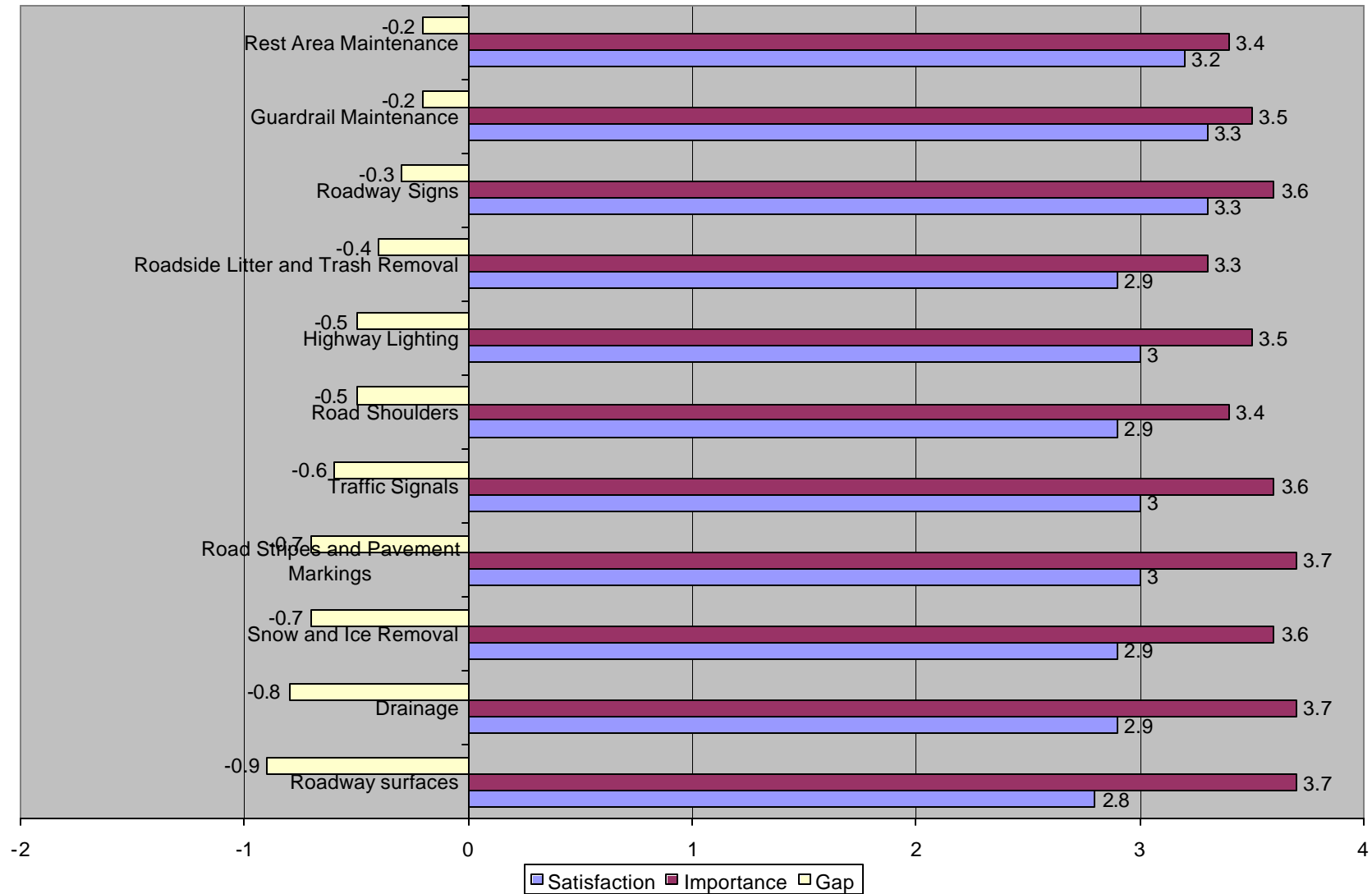


Chart 5: Eastern Washington Gap Analysis (n=205)



## C. What Needs to be Improved

Respondents were asked about the two maintenance activities that they had given the lowest satisfaction rating to. Their responses help to further define what the respondents thought of as problem areas with the maintenance of state highways.

### 1. Highway Lighting

Apart from some very specific concerns about lighting on certain roads, there seemed to be three underlying concerns expressed by respondents who gave lower satisfaction scores to highway lighting:

- High congestion areas (bridges, overpasses, exit ramps) need better lighting
- Better highway lighting may help during inclement weather
- Burned-out lights need to be taken care of more quickly

A male senior citizen from Bellevue echoed the comments of many of the respondents, “Open highways aren’t so important, but the intersections and busier parts should be well lit.”

### 2. Rest Areas

There were three general complaints about the rest areas:

- Cleanliness
- Maintenance and upkeep
- Closures

Respondents said that the general cleanliness of the restrooms needed to be improved. Along with the issue of upkeep of the rest areas were a number of complaints about the lack of toilet paper at these facilities. A number of respondents also expressed displeasure with rest areas being closed, whether seasonally or permanently.

### 3. Traffic Signals

There were a few themes that emerged among the respondents in regard to traffic signals. Unfortunately, some of these themes contradicted each other:

- Too many traffic signals, slows down traffic
- Not enough traffic signals
- Traffic signals need to be synchronized
- More left-turn arrows are needed

Regarding safety issues associated with traffic lights, one respondent said, “the lights need a longer yellow light, I drive a truck and it’s not enough time to stop.” Another respondent said, “the old style of lenses are too reflective and at sunset are hard to decipher.”

### 4. Guardrails

There were three major themes that surfaced regarding guardrails:

- Broken guardrails need to be repaired

- There need to be more guardrails
- Guardrails should be safer (more visible, softer)

The most prominent answer from the respondents was that guardrails were often damaged and not repaired quickly enough.

## 5. Roadway Signs

Among those who responded with lower satisfaction rating for roadway signs there were two themes.

- Visibility is often a problem
- The signs need to be bigger

Most of the problems with visibility appear to be with overgrowth of brush and trees which obscure the signs. Other problems that were brought up were old signs which lost their reflectivity and bullet holes in signs.

## 6. Roadway Surfaces

There were four major themes among those who responded with lower satisfaction ratings for roadway surfaces:

- Trucks deteriorate the roadway surface
- Potholes are not patched quickly enough or well-enough
- Ruts in the lanes are a problem
- The roads are too bumpy

This maintenance activity had the lowest satisfaction scores, and regardless of the reasons listed by the respondents, many believe that the roadway surfaces need to be improved.

## 7. Road Shoulders

There were three themes that emerged regarding road shoulders:

- The shoulders need to be wider
- The shoulders are not wide enough in case of emergency
- Shoulders should not be gravel

Those that gave road shoulders lower satisfaction scores were concerned about the safety of road shoulders and wanted them wider, especially for pulling to the side of the road in emergencies. There was also a desire expressed for a more permanent, more stable shoulders that would not kick gravel up into other cars.

## 8. Drainage Facilities

There were two themes that were consistent among the comments made by respondents who gave drainage facilities lower satisfaction ratings:

- Blocked drainage systems
- Puddles on the road

The primary concern among these respondents was hydroplaning and how it can result if drainage is poor.

## 9. Road Stripes and Pavement Marking

There were four themes that emerged among respondents who gave lower satisfaction scores to road stripes and pavement marking:

- Difficulty in seeing road stripes at night
- Road stripes are often worn off and difficult to see
- Road stripes are difficult to see in times of inclement weather
- Reflectors are helpful (especially at night)

The respondents also mentioned that their problems with road stripes are especially acute in winter.

## 10. Roadside Vegetation

There were three major concerns voiced by respondents who gave roadside vegetation lower satisfaction ratings:

- Grass is not mowed enough
- Dry grass creates a fire hazard
- Overgrown brush obscures drivers' vision

## 11. Roadside Weeds

There were two major themes that emerged among those who gave lower satisfaction ratings to roadside weeds:

- Chemicals should not be used to control the weeds
- Overgrown brush is a problem

## 12. Litter

There were four major themes that emerged among respondents who gave lower satisfaction scores to litter:

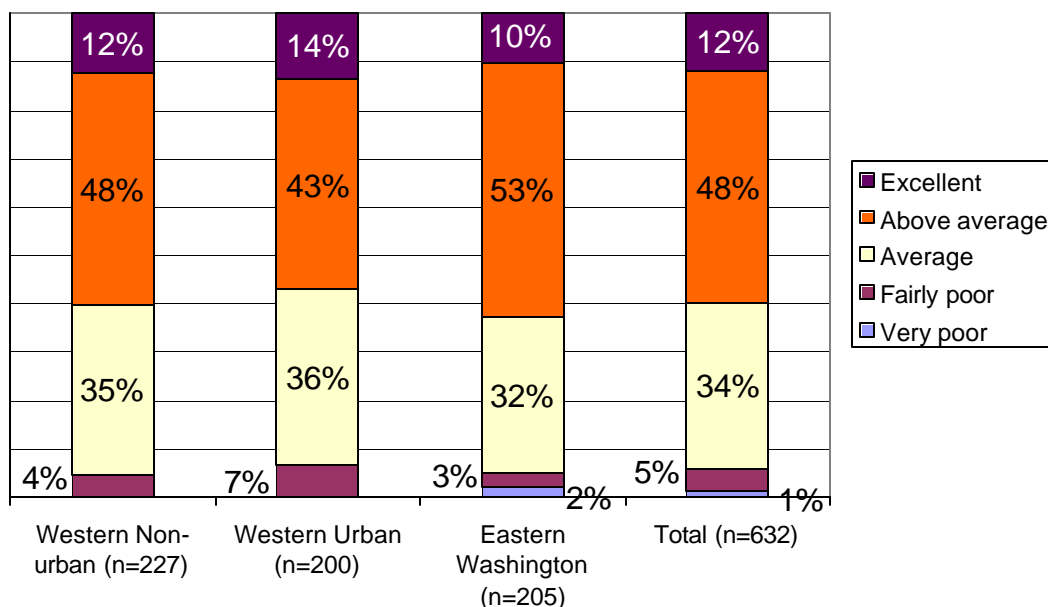
- Litter is a problem
- There should be more clean-up crews
- Groups that adopt a highway should keep their section cleaner
- There should be heavier fines for littering

# **D. Overall Maintenance and Response to Emergencies**

## 1. Overall Maintenance Rating

This question asked respondents to rate highway maintenance “in light of all the topics” that were discussed in the gap analysis questions. Twelve percent reported overall maintenance as being “excellent” compared to 48% reporting maintenance activities to be “above average.” The Western Urban region had the highest percentage of “excellent” with 14%. Only Eastern Washington (2%) had any “very poor” responses.

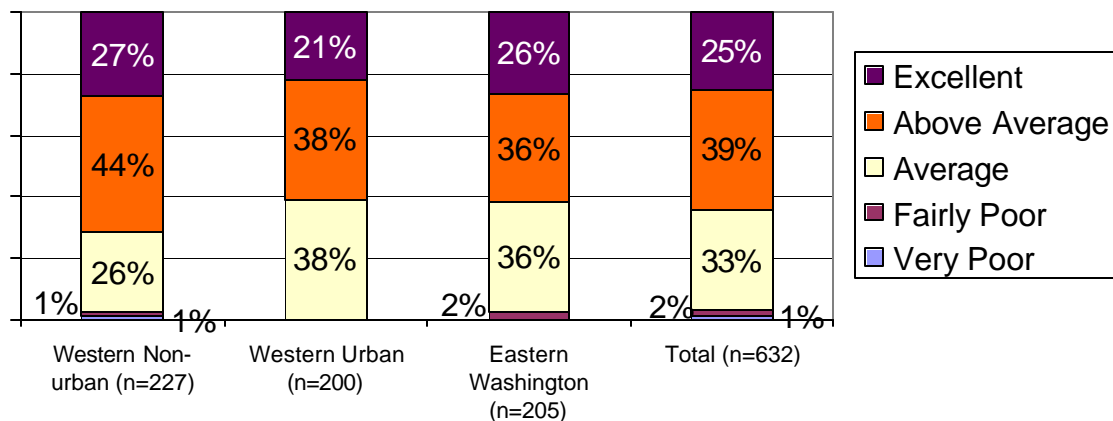
**Chart 5: Overall Satisfaction with Maintenance**



## 2. Response to Emergencies

This question asked respondents to rate the way State maintenance crews responded to emergencies. A full quarter (25%), reported emergency response to be “excellent”, while 39% reported it was “above average.” The Western Non-urban region was most pleased with emergency response with 71% responding either “excellent” or “above average.”

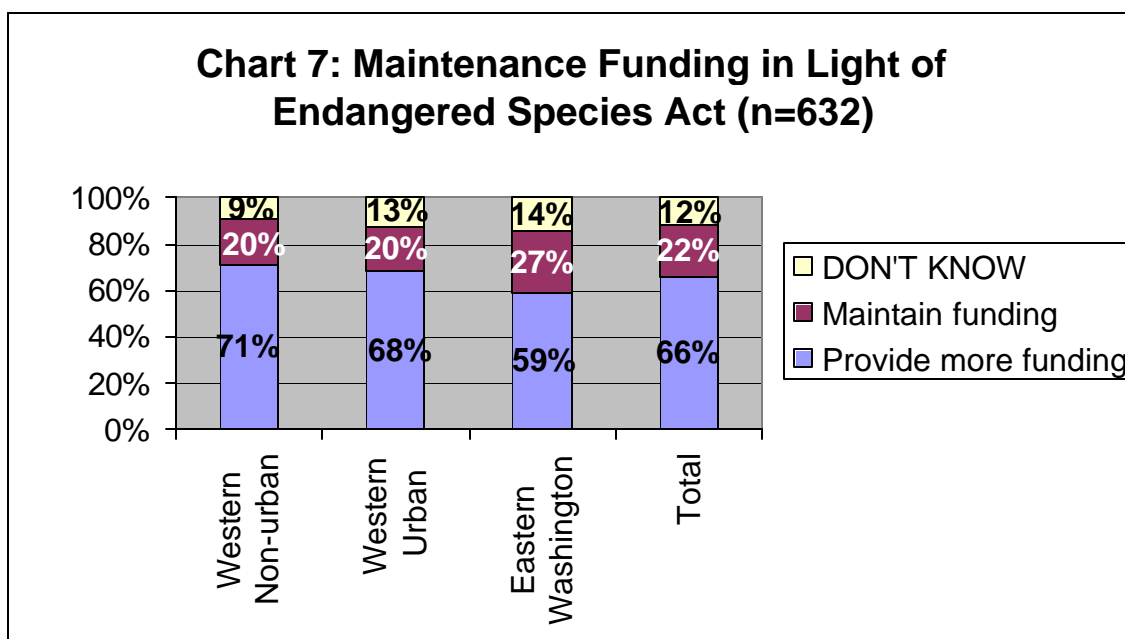
**Chart 6: How Well Do State Maintenance Crews Handle Emergencies?**



## E. Salmon Habitat and Private Contracting

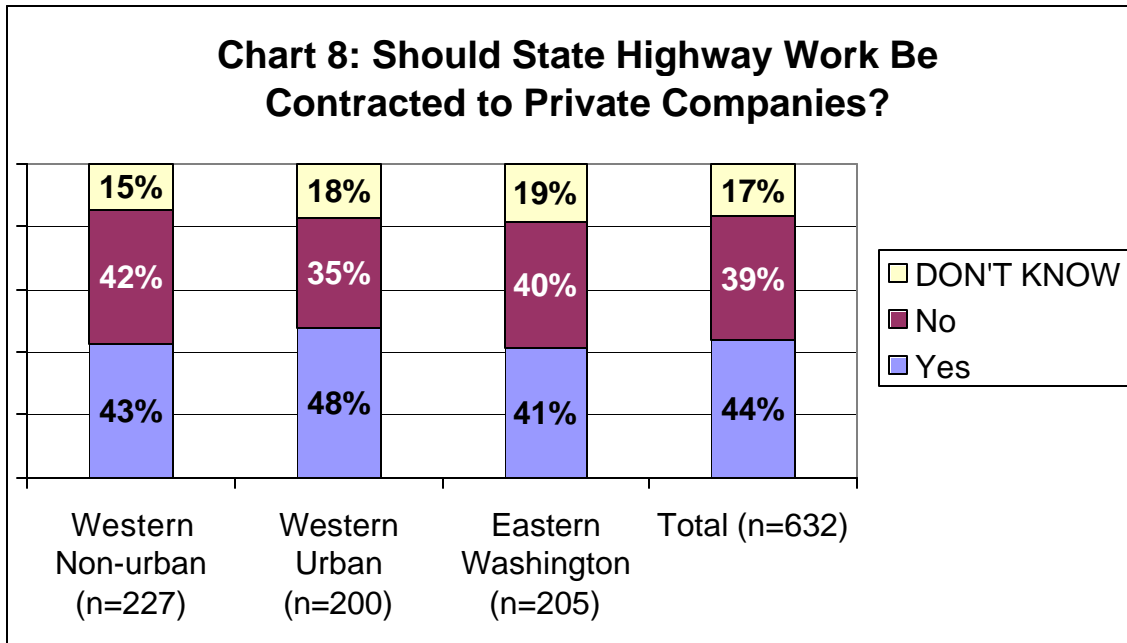
### 1. Salmon Habitat Protection

On the issue of whether the state should increase maintenance funding in light of the fact that current spending levels will decrease because of maintenance funds that will go toward the protection of salmon habitat, two-thirds (66.0%) favored providing more funding for WSDOT Maintenance. Less than one-quarter of the respondents (22.2%) opposed spending more. There was however a statistically significant difference (Cramers-v = .105,  $p = .047$ ) among the regions responses, with Eastern Washington being less interested in providing more funding than the two Western regions.



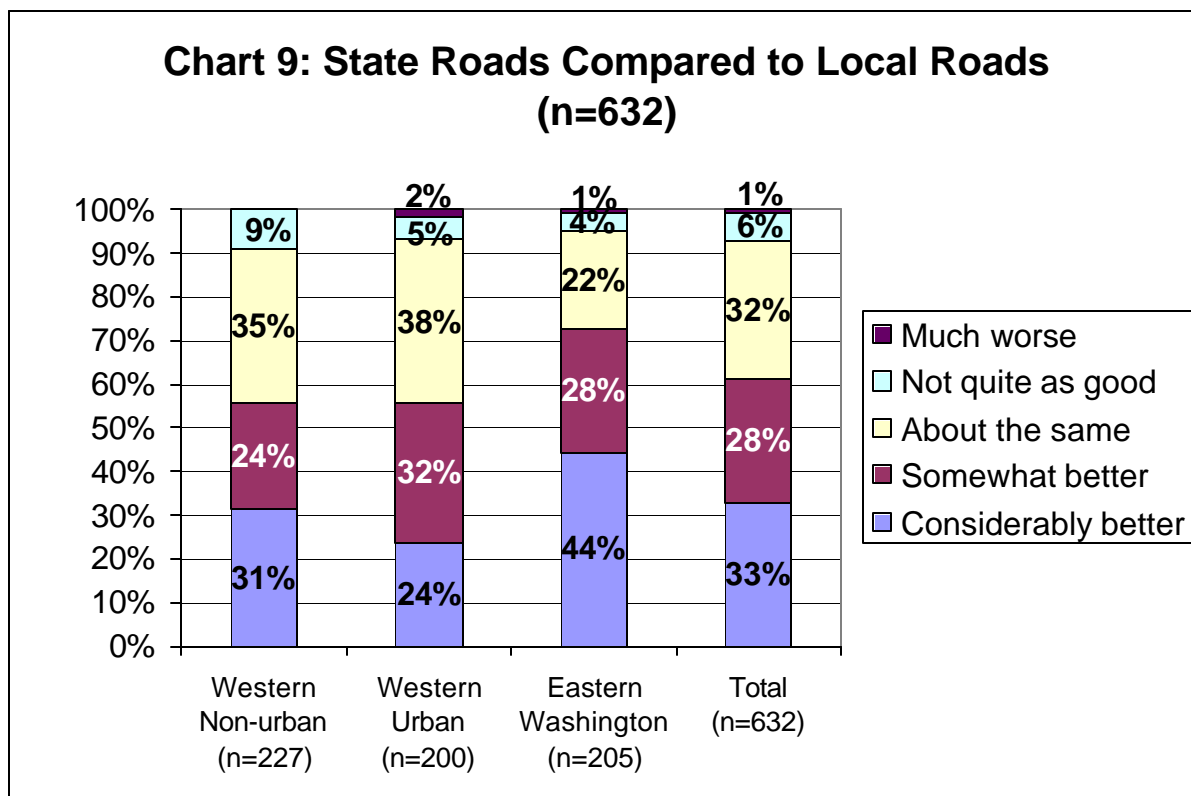
### 2. Private Contracting

Forty-four percent of the respondents reported being in favor of private companies contracting to do maintenance work. Thirty nine percent were opposed.



#### **F. State Highways Compared to Local Roads**

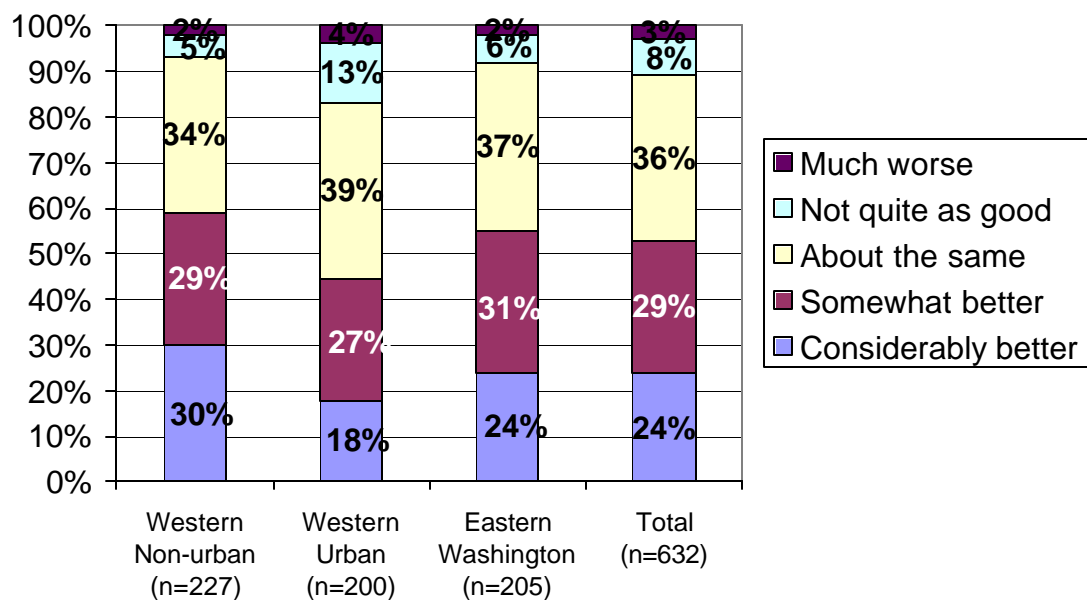
Statewide, the majority of respondents thought state highways were better maintained than local roads. Eastern Washington respondents rated the state highways the highest in comparison to local roads.



### G. State Highways Compared to Other State Highways

The majority of respondents statewide thought that state highways in Washington were better than other state highways. The Western non-urban region gave the highest ratings.

**Chart 10: State Highways Compared to Other States (n=632)**



## **H. Relationship Between Respondent Characteristics**

There were few statistically significant relationships between any of the respondent characteristics (age, length of time a resident, etc.) or the travel behaviors (miles traveled per week, etc) and respondents attitudes toward WSDOT maintenance activities/issues. There were, however, statistically significant but weak relationships between gender and importance scores for all of the maintenance categories (roadside maintenance, litter removal, etc.). In general, females rated the maintenance activities as more important than males. Also, there was a statistically significant but weak relationship between the more urban the area the resident lived in and the more they favored private contracting of highway services.

## **VII. Summary**

### **A. Maintenance Activities**

- The maintenance activities with the highest gap scores were roadway surfaces, road stripes and pavement markings, drainage, and snow/ice removal indicating that these are areas that WSDOT maintenance needs to improve on.
- Eliminating weeds and maintaining roadside vegetation received positive gap scores indicating that maintenance activities are better than needed in these two areas.

### **B. General Satisfaction and the Overall Maintenance Rating**

- More than three-quarters (76%) said they were generally satisfied with the level of maintenance on State highways .
- Later in the survey a query about satisfaction with “overall maintenance” provided a rating of 3.65, one a scale of 1 to 5 with one being “very poor” and five being “excellent.” This rating falls between “average” and “above-average.” Only 12% reported maintenance as being “excellent” compared to 48% reporting maintenance activities to be “above average.” Thirty-four percent gave an “average” rating while only 6% rated maintenance as being “fairly poor” and “poor.”

### **C. Response to Emergencies**

- Response to emergencies received a rating of 3.85, one a scale of 1 to 5 with one being “very poor” and five being “excellent.” This rating falls between “average” and “above-average.” This rating falls between “average” and “above-average.” A full quarter (25%), reported emergency response to be “excellent,” while 39% reported it was “above average.” Thirty-three percent gave an “average” rating while only 3% rated maintenance as being “fairly poor” and “poor.”

### **D. State Highways Compared to Local Roads**

- A third (33%) of the respondents found state highways to be “considerably better” than local roads. Twenty-eight percent thought they were “somewhat better” and 32% thought they were “about the same.” Seven percent reported they were “not quite as good” or “much worse.”

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- When asked about whether more money should be spent on maintenance activities in light of the amount of spending that will go toward restoration of salmon habitat two-thirds (66%) of the respondents favored providing more money to maintain current levels of maintenance activities.

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- Forty-four percent of the respondents said they would be in favor of private companies doing maintenance work under contract to the state. Thirty-nine percent said they are not in favor, and seventeen percent said they don’t know.

#### **H. Regional Differences**

- Despite the apparent differences between the three regions in the graphs, the only statistically significant difference was between Eastern Washington and the two Western regions on the issue of increasing the maintenance budget because of the Endangered Species Act. Eastern Washington was less interested in providing more funding.

#### **I. Respondent Demographics**

- Respondent demographics (age, race, etc.) provided no strong relationships with the data. There were, however, statistically significant but weak relationships between gender and importance scores for all of the maintenance categories (roadside maintenance, litter removal, etc.). In general, females rated the maintenance activities as more important than males.

## Attachment A - Survey

### WSDOT MAINTNENACE CUSTOMER SURVEY QUESTIONNAIRE

Hello. I'm \_\_\_\_\_ and I'm calling for the Washington State Department of Transportation to learn more about public perceptions and attitudes concerning highways in the State of Washington. Do you travel at least 50 miles a week in a motor vehicle on a State Highway? (IF NOT, ASK IF YOU MAY TALK WITH SOMEONE ELSE IN THE HOUSE WHO DOES)

We are talking with Washington citizens about the condition of highways that are maintained by the State. These State highways include U.S., Interstate, and State Routes, but not the arterials and streets maintained by cities and counties.

1. Highway maintenance involves activities such as patching potholes, maintaining signs and signals, doing snow and ice removal, and picking up litter. Thinking about the State highways you have recently traveled on, are you generally satisfied with the level of maintenance of these highways?

- A. Yes                      SKIP TO QUESTION 2
- B. No
- C. Not sure

- 1b. What would you like to see improved? (DON'T READ LIST; PROBE)

- 
- A. Roadway surface - potholes, cracks, rough road
  - B. Signs, signals, lane striping, lighting, reflectors in poor condition
  - C. Snow/ice removal not done effectively
  - D. Rest areas not well-maintained
  - E. Poor drainage
  - F. Litter, debris, overgrown vegetation
  - G. Shoulders are dangerous
  - H. Other (please specify)\_\_\_\_\_

2. I am going to read through a list of categories concerning the level of maintenance of highways in the State. For each category, I would like you to rank your current level of satisfaction or dissatisfaction on a scale of one to four. One point would mean that you are extremely dissatisfied, two points means that you are dissatisfied, three points means that you are satisfied, and four points means that you are extremely satisfied.

After you rate your current level of satisfaction for each maintenance category, I'm going to ask you to rate the importance of each category. For each category, I would like you to rank your current level of importance or non-importance on a scale of one to four. One point would mean that it is extremely not important, two points means that it is not important, three points means that it is important, and four points means that it is extremely important. The

relative importance of different maintenance categories is useful when making decisions on utilizing limited funds. As you consider the importance rating, you may want to think of it in terms of “if I had \$200 worth of work to do but only \$100 to spend, which work activities would I spend the money on and which would not get accomplished”

- A. First, how about the roadway surfaces, in general, where maintenance efforts focus on patching potholes, sealing cracks in the pavement, and repairing other minor flaws in the pavement surface. On the scale from one to four, how satisfied are you with the maintenance level of roadway surfaces on the state highway?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining roadway surfaces?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

- B. How would you rate your level of satisfaction for the maintenance of road shoulders? In your response, you might consider the smoothness of the shoulder, how level it is with the roadway, and its general safety in pulling off the highway.

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining road shoulders?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

- C. What is your level of satisfaction with how well drainage is handled on the highways? This relates to how well stormwater drains from the highway surface so that no puddles form.

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining drainage features?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

- D. What is your level of satisfaction with the level of litter and trash removal from the roadside?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of removing litter from the roadside?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

- E. How would you rate your level of satisfaction with the current level of maintenance in regards to eliminating weeds from the roadside?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of eliminating weeds from the roadside?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

- F. What is your level of satisfaction with how the plants, grasses, and flowers by the roadside appear?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining roadside vegetation?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

- G. How about your level of satisfaction with snow and ice removal?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of snow and ice removal activities?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

- H. How would you rate your level of satisfaction with road stripes and pavement markings?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining road stripes and pavement markings?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

- I. What is your level of satisfaction with how roadway signs are maintained?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining roadway signs?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

J. How about your level of satisfaction with how well guardrail is maintained?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining guardrail?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

K. Next, how satisfied are you with the traffic signals on the highway system?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining traffic signals?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

L. How would you rate your level of satisfaction with how well highway lighting works?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining highway lighting?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

M. How satisfied are you with the maintenance of rest areas.?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

And the importance of maintaining rest areas?

1      2      3      4                      5 (DON'T KNOW/NOT SURE - DO NOT READ)

(LOOKING AT THE LIST OF THIRTEEN ITEMS, NOTE THE TWO WHICH HAVE THE LOWEST RATINGS. IF MORE THAN TWO, SELECT THE FIRST TWO. THEN ROTATE EACH TIME THIS OCCURS. IF EVERYTHING IS RANKED ONE, SKIP TO QUESTION 4.

3a. I notice you gave \_\_\_\_\_ one of the lower satisfaction ratings (MARK FROM ABOVE)

- a. roadway surfaces
- b. road shoulders
- c. drainage facilities
- d. litter
- e. roadside weeds
- f. roadside vegetation
- g. snow and ice removal
- h. road stripes and pavement marking
- i. roadway signs
- j. guardrail
- k. traffic signal
- l. highway lighting
- m. rest areas

3b. What needs to be improved?

---



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4a. And how about \_\_\_\_\_ (MARK FROM ABOVE)

- a. roadway surfaces
- b. road shoulders
- c. drainage facilities
- d. litter
- e. roadside weeds
- f. roadside vegetation
- g. snow and ice removal
- h. road stripes and pavement marking
- i. roadway signs
- j. guardrail
- k. traffic signal
- l. highway lighting
- m. rest areas

4b. What needs to be improved?

---

- 
- 
5. Thinking about all of the different State highway maintenance activities we've talked about, overall would you rate maintenance of the Washington highways as: (READ)
- 

A. Excellent  
B. Above average  
C. Average  
D. Fairly poor or  
E. Very poor

6. How would you rate the way State maintenance crews respond to emergencies such as mud slides, floods, and items blocking the roadways? Would you say they are usually: (READ LIST)
- 

A. Excellent  
B. Above average  
C. Average  
D. Fairly poor or  
E. Very poor

7. Compared to the maintenance of local roads and streets in your area, would you say the maintenance of State highways is... (READ)
- 

A. Considerably better  
B. Somewhat better  
C. About the same  
D. Not quite as good  
E. Much worse

8. And how would you rate the level of maintenance for Washington State highways in comparison to highways in other states? Would you say they are: (READ)
- 

A. Considerably better  
B. Somewhat better  
C. About the same  
D. Not quite as good  
E. Much worse

9. New requirements regarding salmon recovery under the Federal Endangered Species Act significantly increase the costs to conduct some highway maintenance activities. Which would you prefer: a) providing more money to continue present highway maintenance levels and protect salmon habitat or b) keep funding the same which would result in salmon habitat protection but lower highway maintenance levels.

INCREASE FUNDING      MAINTAIN FUNDING      DON'T KNOW

10. While more than 95% of highway maintenance work is currently conducted by employees of the Washington State Department of Transportation, some other states contract with private companies to perform many highway maintenance activities. Do you think that more highway maintenance activities in Washington state should be carried out by private companies under contract to the state?

YES      NO      DON'T KNOW

Now, I would like to ask just a few more questions for comparative purposes only. These answers will in no way be identified with your name.

11. Approximately how many miles do you travel on state highways per week? (DO NOT READ)

- A. 50-100 miles
- B. 101-150 miles
- C. 151-200 miles
- D. 201- 250 miles
- E. 251 or more miles

12. Approximately how many days per week do you use state highways? (DO NOT READ)

- A. 1 day
- B. 2 days
- C. 3 days
- D. 4 days
- E. 5 days
- F. 6 days
- G. 7days

13. How long have you been a resident of Washington State (DO NOT READ)

- A. Less than 6 months
- B. 6 months to 11 months
- C. 1 to 4 years
- D. 5 to 9 years
- E. 10 or more years

14. Do you live in a metropolitan area (SUCH AS SEATTLE, TACOMA, EVERETT, BELLEVUE, SPOKANE), a medium-sized suburban area (SUCH AS OLYMPIA, YAKIMA, OR ELLENSBURG), or a small town or rural area?

- A. Metropolitan area
- B. Suburban
- C. Small town or rural

15. In what city or town do you reside?

16. What is your zip code?

17. How many working motor vehicles are in your household?

18. How would you describe your racial or ethnic background?

- A. White/Caucasian
- B. Black/African American
- C. Latino/Hispanic
- D. Native American/Indian
- E. Asian/ Pacific Islander
- F. Eskimo/ Aleut
- G. Other (please specify \_\_\_\_\_)
- H. Don't know
- I. I prefer not to respond

19. And finally, what is your age? (IF PERSON HESITATES, READ THE RANGES)

- A. Under 25
- B. 25-34
- C. 35-44
- D. 45-54
- E. 55-64
- F. 65-74
- G. 75 and older
- H. Refused

20. Gender of respondent

1. Male

2. Female

## Attachment B – Comparisons to 1995 Survey\*

### Shoulder Maintenance - Satisfaction (2000) and Rating (1995)

	Mean (2000)	N (2000)	Mean (1995)	N(1995)
Western Non-urban	2.90	225	3.21	227
Western Urban	2.90	199	3.23	200
Eastern Washington	2.89	201	3.28	205
Total	2.90	625	3.24	632

### Drainage - Satisfaction (2000) and Rating (1995)

	Mean (2000)	N (2000)	Mean (1995)	N (1995)
Western Non-urban	2.88	222	3.06	227
Western Urban	2.91	197	3.06	200
Eastern Washington	3.09	200	3.44	205
Total	2.96	619	3.15	632

### Snow and Ice Removal - Satisfaction (2000) and Rating (1995)

	Mean (2000)	N (2000)	Mean (1995)	N (1995)
Western Non-urban	2.98	208	3.34	227
Western Urban	2.89	184	3.42	200
Eastern Washington	2.97	200	3.05	205
Total	2.95	592	3.18	632

### Rest Area Maintenance - Satisfaction (2000) and Rating (1995)

	Mean (2000)	N (2000)	Mean (1995)	N (200)
Western Non-urban	3.25	193	3.56	227
Western Urban	3.32	172	3.52	200
Eastern Washington	3.15	181	3.38	205
Total	3.24	546	3.48	632

### Roadway Surface - Satisfaction (2000) and Rating (1995)

	Mean (2000)	N (1995)	Mean (1995)	N (2000)
Western Non-urban	3.25	193	3.03	227
Western Urban	3.32	172	3.21	200
Eastern Washington	3.15	181	3.06	205
Total	3.24	546	3.14	632

\* Comparisons between these two surveys are difficult because of the differences in responses the interviewee was given. The 200 survey used a four point scale that did not allow for a neutral response. For example on questions of satisfaction the response categories were: very satisfied, somewhat satisfied, somewhat dissatisfied, very dissatisfied. The reason for this was to elicit a true response because the tendency for interviewees who have been asked a lot of questions is to fall back on a neutral response without thinking.

In this table a “four” score represents very satisfied, and a “3” somewhat satisfied. In order to mesh these responses with the responses from 1995, the neutral responses were thrown out, hence the different populations that responded to each question.